

# ERRATUM: “A SMALLER RADIUS FOR THE TRANSITING EXOPLANET WASP-10b” (2009, *ApJ*, 692, L100)

JOHN ASHER JOHNSON<sup>1,4</sup>, JOSHUA N. WINN<sup>2</sup>, NICOLE E. CABRERA<sup>3</sup>, AND JOSHUA A. CARTER<sup>2</sup>

<sup>1</sup> Institute for Astronomy, University of Hawaii, Honolulu, HI 96822, USA; [johnjohn@ifa.hawaii.edu](mailto:johnjohn@ifa.hawaii.edu)

<sup>2</sup> Department of Physics, and Kavli Institute for Astrophysics and Space Research, Massachusetts Institute of Technology, Cambridge, MA 02139, USA

<sup>3</sup> School of Physics, Georgia Institute of Technology, 837 State Street, Atlanta, GA 30332-0430, USA

*Online-only material:* machine-readable table

We have identified an error in our Heliocentric Julian Dates (HJDs) of observation caused by incorrect input to the code used to convert from JD to HJD. The times in Table 1 have been corrected by adding 0.006382 day to each entry in the original Column 1. Similarly, the measured mid-transit time in Table 2 has been changed to  $T_c = 2454664.037295$ . We also note that the header in Column 1 of Table 1 is incorrect. The label should read HJD, rather than BJD. The updated Tables 1 and 2 have been included herein.

This error has no impact on our main conclusions. We thank Pedro Valdes Sada and Gracjan Maciejewski for pointing out the incorrect mid-transit time.

**Table 1**  
Relative Photometry for WASP-10

Heliocentric Julian Date	Relative Flux
2454663.95058	0.99986
2454663.95151	0.99970
2454663.95244	1.00028
2454663.95335	1.00031
2454663.95428	0.99885
...	...

(This table is also available in a machine-readable form in the online journal.)

**Table 2**  
System Parameters of WASP-10

Parameter	Value	68.3% Confidence Interval	Comment
<i>Transit parameters</i>			
Mid-transit time, $T_c$ (HJD)	2454664.037295	$\pm 0.000082$	A
Orbital period, $P$ (days)	3.0927616	$\pm 0.0000112$	D
Planet-to-star radius ratio, $R_p/R_*$	0.15918	$-0.00115, +0.00050$	A
Planet-star area ratio, $(R_p/R_*)^2$	0.02525	$-0.00028, +0.00024$	A
Scaled semimajor axis, $a/R_*$	11.65	$-0.13, +0.09$	A
Orbit inclination, $i$ (deg)	88.49	$-0.17, +0.22$	A
Transit impact parameter, $b$	0.299	$-0.043, +0.029$	A
Transit duration (hr)	2.2271	$-0.0068, +0.0078$	A
Transit ingress or egress duration (hr)	0.3306	$-0.0075, +0.0098$	A
<i>Other orbital parameters</i>			
Semimajor axis (AU)	0.03781	$-0.00047, +0.00067$	B
$e \cos \omega$	$-0.0453$	$\pm 0.02$	C
$e \sin \omega$	0.0228	$\pm 0.03$	C
Velocity semi-amplitude $K_*$ (m s <sup>-1</sup> )	533.1	$\pm 7.5$	C
<i>Stellar parameters</i>			
$M_*$ ( $M_\odot$ )	0.75	$-0.028, +0.040$	B
$R_*$ ( $R_\odot$ )	0.698	$\pm 0.012$	B
$\rho_*$ ( $\rho_\odot$ )	3.099	$\pm 0.088$	A
$\log g_*$ (cgs) <sup>a</sup>	4.627	$-0.0093, +0.0101$	B
[M/H]	0.03	$\pm 0.2$	D
$T_{\text{eff}}$ (K)	4675	$\pm 100$	D

<sup>4</sup> NSF Astronomy and Astrophysics Postdoctoral Fellow.

**Table 2**  
(Continued)

Parameter	Value	68.3% Confidence Interval	Comment
<i>Planetary parameters</i>			
$M_P$ ( $M_{\text{Jup}}$ )	3.15	$-0.11, +0.13$	B,C
$R_P$ ( $R_{\text{Jup}}$ )	1.080	$\pm 0.020$	B
Mean density, $\rho_P$ ( $\rho_{\text{Jup}}$ )	3.11	$\pm 0.20$	B,C
$\log g_P$ (cgs)	3.828	$\pm 0.012$	A
Equilibrium temperature $T_{\text{eff}}(R_*/a)^{1/2}$ (K)	1370	$\pm 50$	D

**Notes.** A: determined from the parametric fit to our light curve. B: based on group A parameters supplemented by the  $Y^2$  stellar evolutionary models. C: based on our analysis of the C08 RV measurements. D: reproduced from C08.

<sup>a</sup> The  $\log g_*$  in the table is the value implied by the  $Y^2$  stellar evolution models, given the measured values of  $T_{\text{eff}}$ ,  $[M/H]$ , and  $\rho_*$ . It is in near agreement with the value  $4.40 \pm 0.20$  reported by C08, based on the widths of pressure-sensitive absorption lines in the stellar spectrum.